

REMARKS

Claims 1, 17 and 27 are presently pending. Claims 1 and 17 have been amended to correct inadvertent typographical errors in the structures of claims 1 and 17. Claims 1, 17 and 27 have been amended to correct an inadvertent typographical error with respect to the variable “*a*” which was inadvertently set forth as “ α .” Claims 1, 17 and 27 have also been amended to reflect certain stylistic changes. No new matter has been added. Applicants reserve their right to prosecute the subject matter of any canceled, amended or withdrawn claim, or any other unclaimed subject matter, in one or more continuation, divisional or continuation-in-part applications.

I. The Rejections Under 35 U.S.C. §112, Second Paragraph

Claims 1, 17 and 27 are rejected under 35 U.S.C. §112, second paragraph, for allegedly being indefinite.

Claims 1 and 17 have been amended to correct an inadvertent typographical error wherein the variable “ R_4 ” was inadvertently omitted from the structures set forth in claims 1 and 17. Support for these amendments is found in the specification at page 18, line 1 and claims 1 and 17 as filed.

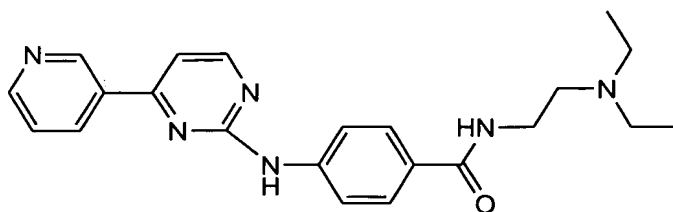
Claims 1, 17 and 27 have been amended to correct an inadvertent typographical error with respect to the variable “*a*” which was inadvertently set forth as “ α .” Support for these amendments is found in the specification at page 7, lines 6-10.

In view of the above amendments and remarks, it is believed that the rejection of claims 1, 17 and 27 under 35 U.S.C. §112, second paragraph, cannot stand and must be withdrawn.

II. The Rejection Under 35 U.S.C. §102(e)

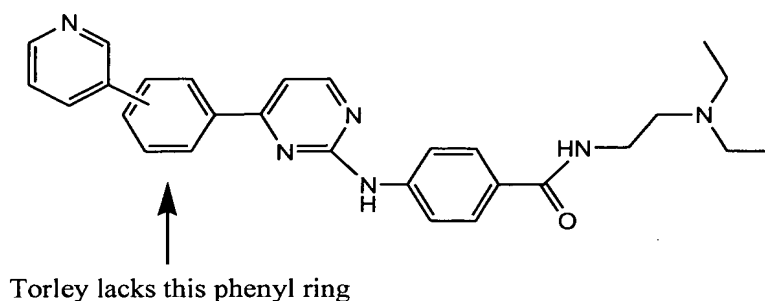
Claim 27 is rejected under 35 U.S.C. §102(e) as being allegedly anticipated by U.S. Patent No. 4,876,252 to Torley *et al.* (“Torley”). In particular, the Examiner cites column 2, lines 14-17, Example 265 of Torley. Applicants respectfully disagree with the rejection because, as discussed below, claim 27 requires a phenyl ring which is not present in the compound of Example 265 of Torley.

The compound of Example 265 of Torley has the following structure:



N-[2-(diethylamino)ethyl]-4-[[4-(3-pyridinyl)-2-pyrimidinyl]amino]benzamide.

A compound of claim 27 wherein R_7 is heterocycle (*e.g.*, pyridine); $R_5 = R_8 = H$; $R_6 = (CH_2)_2NR_9R_{10}$ (wherein R_9 and R_{10} are each ethyl) has the following structure:



As set forth above, the compound of Example 265 of Torley does not have a phenyl ring between the pyridine and pyrimidine rings as is required by claim 27.

Accordingly, in view of the above remarks, the rejection of claim 27 under 35 U.S.C. §102(e) cannot stand and must be withdrawn.

III. The Rejections Under 35 U.S.C. §103(a)

Claims 1 and 17 are rejected under 35 U.S.C. §103(a) as being allegedly obvious over U.S. Patent No. 6,693,108 B2 by Green *et al.* ("Green"). For the reasons set forth below, Applicants respectfully disagree.

It is well established that the fact that a claimed compound may be encompassed by a disclosed generic formula does not by itself render that compound obvious. *In re Jones*, 958 F.2d 347, 350 (Fed. Cir. 1992). Furthermore, the Federal Circuit has held that the disclosure of a chemical genus does not render obvious any compound falling within the genus, particularly when the disclosure indicates a preference leading away from the claimed compounds. *In re Baird*, 16 F.3d 380, 382-383 (Fed. Cir. 1994). Rather, a finding of obviousness requires that the prior art reference disclosing the generic formula must also provide the requisite motivation to arrive at the claimed compounds. *In re Lalu*, 747 F.2d

703, 705 (Fed. Cir. 1984). These principles are applicable to the claimed methods which employ specific compounds. Indeed, the Examiner rejects the claimed methods of using certain compounds based upon the structures of the compounds in the art.

Applicants respectfully submit that the compounds used within the methods of claims 1 and 17, and therefore the claimed methods, are not obvious in view of the disclosure of Green and that the disclosure of Green, in fact, leads one away from the compounds of claims 1 and 17.

In particular, to arrive at the compounds used within the methods of claim 1 or claim 17 from the class of compounds disclosed in Green, one would not only have to select that R_1 is Ar_2 , but would also have to select substituted aryl from the list of possible groups set forth for Ar_2 , select that the aryl group is phenyl, select that the phenyl group is substituted with $CON(R)_2$, select that the phenyl group is substituted in the *para* position with $CON(R)_2$ and also select that R is an aliphatic group substituted with specific substituents. Applicants respectfully submit that there is no motivation in Green to select these particular groups to arrive at the compounds set forth in claim 1 or claim 17, much less to employ such selected compounds in the claimed methods.¹

When determining whether one of ordinary skill in the art would have been motivated to select particular species or a particular subgenus, the Examiner should consider *inter alia* the teachings of structural similarity (*i.e.*, which species or subgenus are described as typical, preferred or optimum). See MPEP 2144.08. In doing so, any teaching or suggestion of a preferred species or subgenus that is structurally different from the claimed species or subgenus may weigh against selecting the claimed species or subgenus and, accordingly, against a determination of obviousness. *In re Baird*, 16 F.3d at 382-383; MPEP 2144.08.

Applicants respectfully submit that the absence of $CON(R)_2$ from the preferred groups (*e.g.*, those set forth in Tables 1-7, and particularly the summary paragraph following Table 1) which Green teaches phenyl can be substituted with when $R_1 = Ar_2 = \text{phenyl}$, weighs heavily against a determination that the presently claimed compounds are obvious over Green.

For example, Table 1 (beginning at column 8, line 40) does not set forth any examples wherein R^1 is a phenyl ring substituted in the *para* position (*i.e.*, R^5) with $CON(R)_2$. In addition, $CON(R)_2$ is specifically excluded from the list of preferred phenyl substituents (*see* column 17, lines 1-6) when R_1 is phenyl.

¹ As a result, the rejection lacks the requisite suggestion, motivation and the reasonable expectation of success.

Table 2 (beginning at column 17, line 13) only sets forth compounds wherein R¹ is other than phenyl, which is not allowed for by claim 1 or claim 17.

Tables 3 and 4 (beginning at column 23, line 1 and column 28, line 31, respectively) only set forth compounds wherein R¹ requires a T group and T is C(=O), which is not allowed for by claim 1 or claim 17.

Table 5 (beginning at column 29, line 1) does not set forth any examples wherein R₁ is a phenyl ring substituted in the *para* position, let alone substituted in the *para* position with CON(R)₂.

Table 6 (beginning at column 31, line 40) does not set forth any examples wherein R₁ is a phenyl ring substituted in the *para* position with CON(R)₂.

Table 7 (beginning at column 39, line 1) does not set forth any examples wherein R₁ is a substituted phenyl ring, let alone a phenyl ring substituted in the *para* position, or a phenyl ring substituted in the *para* position with CON(R)₂.

In summary, the compounds of claims 1 and 17 are those which require a phenyl group substituted in the *para* position with a substituted carbomoyl (*i.e.*, CON(R₅)(R₆), wherein R₅ and R₆ are various substituents which are other than H or an aliphatic group). Green does not disclose or suggest any compounds possessing a phenyl group substituted in the *para* position with a carbamoyl group and certainly does not disclose or suggest any compounds possessing a phenyl group substituted in the *para* position with a carbamoyl group substituted with the R₅ and R₆ groups of claims 1 and 17. Thus, Applicants respectfully submit that the compounds of claims 1 and 17 are not obvious in view of Green.

Accordingly, in view of the above remarks, it is believed that the rejection of claims 1 and 17 under 35 U.S.C. §103(a) cannot stand and must be withdrawn.

Conclusion

Applicants respectfully request that the present amendments be entered and the present remarks be made of record in the file history of the present application. An early allowance of the application is earnestly requested. The Examiner is invited to call the undersigned with any questions concerning the foregoing.

No fee is believed to be due in connection with this response; however, should any other fee be required, Applicant hereby authorizes that such fee be charged to Jones Day Deposit Account No. 50-3013.

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